Monsanto

FROM K. E. Boucher, W. G. Krummrich Plant

DATE June 20, 1974

SUBJECT REVISED MONOCHLOROBIPHENYL COST INCLUDING RESIDUE DISPOSAL

cc D. R. Cova - T3C
W. C. Engman
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TO J. R. Savage
General Offices
B2SL

Both the isomerization and hydrochlorination routes for disposal of monochlorobiphenyl residue have been considered. Based on this evaluation the following conclusions were generated:

1. New capital for 8M #/yr plant

Isomerization	$200,000
Hydrochlorination	$1,100,000

2. Operating Cost

Isomerization	$27.828/cwt
Hydrochlorination	$32.886/cwt

The isomerization route can be installed within a reasonable time for it mostly consists of modifying existing equipment. The hydrochlorination route includes new equipment to be located west of the Aroclor department.

My thanks to Dave Johnson who supplied the cost information and usage estimate for the Pd/C catalyst. Also Lee Darnell's explanation of the 247 hydrogenation helped considerably. Both Gary Johnson and Pat McMahon assisted in putting together the cost sheets.

Ken Boucher

Kenneth E. Boucher
Technical Services Department

MONS 021797

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att.

6/20/74
KEB

COST FOR MANUFACTURE OF

MONOCHLOROBIPHENYL - 8M #/YR

ISOMERIZATION ROUTE

New Capital $200,000

Operating Cost (see MCS 1547 Cost Std.)

Raw Mat'l	$21.399
Directs	4.788
Indirects	1.640
Product Cost	$27.828/cwt

HYDROCHLORINATION ROUTE

Additional Capital $900,000

Additional Operating Cost (see cost sheet)

Raw Mat'l	$ 3.911
Directs	.611
Indirects	.844
Gross Cost	$ 5.366/cwt
Above Product Cost	$27.828
	$33.194
-AL Cl_3 Cost	.308
Product Cost	$32.886/cwt

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HYDROCHLORINATION

Cost of 5% Pd/C

New (have to buy metal)	
Metal Cost $/Tri oz.	$127
Wt. metal/kilo., Tri oz.	1.60
Metal cost/kilo., catalyst	$203.20
Conversion Cost $/kilo	$ 9.72
Total Cost	$212.92/kilo
Reclaimed (Metal taken from Co. Pool)	
Conversion cost/kilo	$ 9.72
Recovery Cost (70% recovery)	$ 11.20
(≈$10 Tri oz.)	
Make-up Metal Cost	$ 60.96
Total Cost	$ 81.88/kilo

(Dave Johnson)
6/20/74